Catalogue no. 13-604-M — no. 061
ISSN: 1707-1739
ISBN: 978-1-100-12540-4

Research Paper

Income and Expenditure Accounts Technical Series

Human Resource Module of the Tourism Satellite Account, 2007

Income and Expenditure Accounts Division
21st Floor, R.H. Coats Building, Ottawa, K1A 0T6

Statistics Canada Statistique Canada

Canada

Human Resource Module of the Tourism Satellite Account, 2007

This paper reports on the update to 2007 of the Human Resource Module (HRM) of the Tourism Satellite Account developed by Statistics Canada. The HRM provides detailed information on employment related to tourism. Information on wages and salaries, number of jobs and hours worked by occupation are included. The data are also disaggregated by age, gender and immigration status. This study provides a resource for training and planning for tourism.

This study was prepared by Monique Bisaillon and Charles Morissette of the Research and Development Projects and Analysis Section, Income and Expenditure Accounts Division, Statistics Canada. The study was made possible with joint funding from the Canadian Tourism Human Resource Council, Human Resources and Skills Development Canada and Statistics Canada.

Ottawa
May 2009

Catalogue no. 13-604-M no. 61
ISSN: 1707-1739
ISBN: 978-1-100-12540-4

Catalogue no. 13-604-MPB no. 61
ISSN: 1707-1720
ISBN: 978-0-662-06787-0

La version française de cette publication est disponible (n° 13-604-M n° 61 au catalogue)

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2009

The content of this electronic publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it be done solely for the purposes of private study, research, criticism, review or newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate): Statistics Canada, year of publication, name of product, catalogue number, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, by any means—electronic, mechanical or photocopy—or for any purposes without prior written permission of Licensing Services, Client Services Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

Standards of service to the public
Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "About us" > "Providing services to Canadians."

Table of contents

Highlights . . . 5
1. Introduction . . . 6
2. Framework . . . 6
3. Concepts and definitions . . . 7
4. Scope of study . . . 8
5. Results . . . 10
6. Conclusions and future work . . . 19
Appendix A: Data sources . . . 20
Appendix B: Methodology . . . 23
Appendix C: Tourism industries in the HRM . . . 25
Appendix D: Tourism occupations in the HRM . . . 27
Appendix E: Table structure . . . 29
Glossary of terms . . . 30
References . . . 33
Technical series . . . 34

Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of *the Statistics Act*
E	use with caution
F	too unreliable to be published

Highlights

- This study provides detailed employment data in a Human Resource Module (HRM) of the Canadian Tourism Satellite Account (CTSA). This information is useful for tourism analysts and employment and training planners.
- Since the HRM is based on the same concepts as the CTSA and the National Tourism Indicators (NTI), direct comparisons can be made with the data in these accounts.
- With this release, the HRM is updated to 2007 from 2006. Revised Labour Force Survey and Canadian Productivity Accounts' estimates, as well as the Census 2006, have been incorporated, leading to revisions of the HRM estimates for 1997 to 2006. In addition, a refinement was made to better match the tourism industries in the CTSA. Finally, occupation groups are now based on the National Occupational Classification for Statistics (NOC-S) 2006.
- Detailed information is available for all tourism industries, in this case aggregated into five industry groups. These industry groups include transportation (which is further split into air transportation and other transportation), accommodation, food and beverage services, recreation and entertainment and travel services.
- The HRM provides information on the number of employee jobs, hours worked, and employment earnings according to whether the jobs are full-time or part-time, by occupation. The same information is also available according to the gender, age group and immigrant status of employees. More aggregated estimates are provided for self-employment jobs.
- One of the strengths of the HRM is that it can convey information from two different perspectives; the total industry approach and the CTSA approach. With the former, all jobs in an industry are estimated. With the CTSA approach, in contrast, only a fraction of these jobs, the ones that can be directly attributed to spending by tourists, is estimated.
- With this update, the annual estimates of total employment in the tourism industry groups of the HRM are made available. Detailed estimates of the employment that can be directly attributed to tourism demand (or spending by tourists) are under development.
- In 2007, 1.7 million jobs were held in the tourism industries covered in the HRM. This represented about 10% of the 17.1 million jobs in the economy that year.
- According to the National Tourism Indicators, 525 thousand of these 1.7 million jobs could be directly attributed to tourism demand (spending).
- The number of jobs in the tourism industries was up 3.4% in 2007, after growing 2.0% in 2006. By comparison, the number of jobs economy-wide was up 2.1% in 2007, following a 1.8% gain in 2006.
- In 2007, food and beverage services added 23 thousand jobs, while more modest increases were recorded in recreation and entertainment (+10 thousand), other transportation (+10 thousand) and accommodation (+8 thousand). Job gains were smaller in air transportation (+2 thousand) and travel services (+2 thousand).
- The weekly hours worked in jobs in the tourism industries averaged 29.8 hours in 2007, compared to an economy-wide average of 33.3 hours per job.
- Hourly compensation increased faster in tourism industries compared to the economy overall. Hourly compensation in tourism in 2007 was $18.33 per hour, up 5.1% from one year earlier. Hourly compensation averaged $27.68 across all jobs in the economy, up 4.0%.

1. Introduction

The aim of the Human Resource Module (HRM) is to provide timely and reliable statistics on the human resource dimension of tourism. Both the Canadian Tourism Satellite Account (CTSA) and the National Tourism Indicators (NTI) already carry some limited information on the number of jobs generated by tourism, while the former carries information on the labour income associated with these jobs as well.

The HRM complements and enhances the analytical capacity provided by the CTSA and the NTI, allowing for a broader insight into tourism's role in the economy. It also serves as a useful planning and forecasting tool for policy makers in the tourism, employment and training areas. Various tourism-affiliated agencies, academics, and decision-makers in tourism will also be able to use it for research and analysis, planning and development.

Human resource planning involves all persons working in tourism, regardless of whether their income comes directly from serving a tourist or a non-tourist. Consequently, the total number of jobs in tourism industries is a major focus of the HRM. This is broader than the CTSA and the NTI, which portray only the jobs generated by tourism demand.

It should be emphasized that, for consistency with the Canadian System of National Economic Accounts (CSNEA), the HRM uses the number of jobs as its key measure of employment. This is not the same as the Labour Force Survey measure of employment, which is the number of people employed. The two differ because of multiple job-holders, thus the former measure exceeds the latter by the number of people with second, third, etc., jobs.

Outlining the rest of the report, the following two sections discuss the accounting frameworks behind the HRM, key tourism concepts and definitions from the CTSA, and various labour concepts and definitions from the CSNEA. The scope of the study, including descriptions of the industry groups and occupations used, is described next. Selected results are then discussed to demonstrate analytical uses of the HRM. Conclusions and future work are discussed in the last section.

Appendix A summarizes the data sources and Appendix B outlines the methodology. Appendix C provides a list of North American Industrial Classification System (NAICS) industries included in the industry groups of the HRM, while Appendix D lists the occupations. A summary of the tables available in the HRM is included in Appendix E. A glossary of terms and a list of references are also provided.

2. Framework

The HRM is based on and rooted in the accounting framework of the Canadian TSA, which follows the international guidelines in *Recommended Methodological Framework: Tourism Satellite Account* (TSA: RMF).[1] In turn, the TSA: RMF is based on the accounting framework and principles of the internationally recognized System of National Accounts 1993 (SNA).[2]

Because the HRM uses the same framework, concepts and definitions as the Canadian TSA (CTSA), results from both can be readily compared. By extension, the HRM results can be compared to those of the CSNEA, in particular, to the number of jobs, hours worked and labour income in other industries in the economy. This enhances the analytical capacity of the HRM.[3]

---

1. Commission of the European Communities Eurostat, Organisation for Economic Co-operation and Development, World Tourism Organization, United Nations Statistics Division, *Tourism Satellite Account: Recommended Methodological Framework*, Luxembourg, Madrid, New York, Paris, 2001.
2. Commission of the European Communities Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, *System of National Accounts 1993*, Brussels, Luxembourg, New York, Paris, Washington, 1993.
3. Some conceptual differences exist between the Canadian TSA and the international guidelines in the TSA-RMF. See Katharine Kemp and Shaila Nijhowne, "Study of the Canadian Tourism Satellite Account: Comparison of the TSA-RMF and CTSA," report prepared for the Canadian Tourism Commission for the meetings of the Macroeconomics and Statistics Sub-Committee of the World Tourism Organization, March 8-9, 2004 in Madrid.

3. Concepts and definitions

The HRM carries information on the number of employee and self-employment jobs, full-time equivalent employment, total hours worked and labour income, gross wages and salaries and supplementary labour income. Some of these basic concepts and definitions are described next. They are discussed from a total industry perspective first, that is to say, regardless of the source of demand, tourism or non-tourism.

In the HRM, total employment in an industry is the number of all employee and self-employment jobs in that industry. It should be noted that a job that exists for only part of the year (e.g., 4 months) counts as only a fraction of a job (1/3 of a job) for the year. It should also be noted that a part-time job at 10 hours a week counts as much as a full-time job at 50 hours a week; each is one job. For this reason, jobs are not a good measure of labour inputs to production.

A better measure is full-time equivalent employment in which part-time jobs are converted to full-time jobs on the basis of hours worked.[4] For example, two part-time jobs of twenty hours per week would be equivalent to one full-time job at forty hours per week. Total hours worked is an even better measure of aggregate volume of labour inputs to production, and the one used in the CSNEA to calculate labour productivity.[5] The concept here is that of actual hours worked, not usual hours, and of hours worked, not hours paid (see Appendix A.1).

The value of labour inputs to production in an industry is measured by the labour income and a labour component of mixed income for all jobs in that industry. Labour income consists of gross (i.e., before tax) wages and salaries, including tips,[6] commissions, bonuses, as well as supplementary labour income which covers mandatory and non-mandatory employer contributions to pension plans and social insurance and similar benefits. Mixed income is the income after expenses of unincorporated business accruing to the self-employed.[7]

The HRM also estimates the number of jobs that can be directly attributed to, or generated by, tourism demand. These estimates provide the link between the HRM and the CTSA/NTI. Thus, tourism employment in an industry is the number of jobs generated by, or attributable to, visitor spending on the goods and/or services produced by that industry. The difference between tourism employment and total employment is the number of jobs attributable to non-tourism (i.e., not directly attributable to tourism demand).

As an example, if the full-service restaurants industry has a total of 100,000 jobs, only the share that is directly associated with tourism (say 25%, or 25,000 jobs) represents the tourism employment in this industry. Similarly, only 25% of the full-time equivalent employment, total hours worked and labour income is attributed to tourism. Derived variables, such as annual average hours worked and annual average wage and salary per tourism job, as well as the average hourly earnings per hour worked per tourism job are assumed to be the same for all jobs in an industry.

At the core of the CTSA and the NTI is the definition of tourism. Tourism is defined according to international standards as: "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited". Persons who engage in tourism, so-defined, are called visitors. Visitors consist of tourists (those who visit and stay outside their usual environment for at least one night) and same-day visitors.

4. While full-time equivalent job is a better measure of labour inputs to production, it is not necessarily a better measure for all purposes. For instance, it is not very useful for assessing the number of people who may need training.

5. By combining tourism GDP from the CTSA/NTI and hours worked attributable to tourism from the HRM, a measure of tourism labour productivity, which is fully consistent with CSNEA measures of labour productivity by industry, can be obtained.

6. The imputation of unreported tips in the CSNEA is described in Appendix A.1.

7. Mixed income is found in the CTSA. For the HRM, an imputation is made for the labour component of mixed income. See the discussion of Step 1 of the methodology in Appendix B.

The definition of tourism is quite broad in that both personal and business travels are included. The international standard does not precisely spell out the notion of usual environment, thereby allowing a country to apply its own specifications. For operational purposes, Canada has defined the concept of usual environment as the area less than 80 kilometres one-way from home.[8] It should be noted that not all travel is tourism. In particular, the definition rules out several types of travel, including commuting to and from work or school, travel by armed forces and diplomats, as well as migration. On the other hand, crossing an international boundary is considered tourism regardless of the distance travelled.

Tourism demand is the spending by Canadian and non-resident visitors on domestically produced commodities. This spending has a direct impact on a wide range of industries, some more so than others. This leads to a definition of a tourism industry as one that provides tourism commodities to visitors that would cease to exist without tourism, or would continue to exist only at a significantly reduced level of activity. By this definition, travel services is a tourism industry, while retail trade, which derives some of its business from visitors, is not. A tourism commodity is a good or service for which a significant part of its total demand comes from visitors. Air passenger transportation is a tourism commodity, while groceries, although occasionally bought by visitors, is not, because most groceries are bought by local residents.

Gross domestic product (GDP) can be defined as the unduplicated value of production of goods and services within the geographic boundaries of a country or region (e.g., province, territory).[9] Tourism GDP is the GDP that can be attributed to the production of goods and services consumed directly by visitors.[10] In the CTSA, tourism GDP is calculated as the sum of the labour income, mixed income (net income of unincorporated business) and other operating surplus (corporate profit and depreciation) that can be directly attributed to visitor spending.[11]

Several socio-demographic variables are available in the HRM. One of these, immigrant status, is defined as follows: an immigrant is a permanent resident who is not a Canadian citizen at birth or is a person who holds a study or work permit or who is a refugee claimant or is a family member living with a refugee claimant. A non-immigrant is a person who is a Canadian citizen at birth.

4. Scope of study

The scope of this study is unchanged from last year. The information on the number of jobs, hours worked and employment earnings is presented for the same industry groups for full- and part-time jobs. The information is also available according to the same characteristics of employees (gender, age group and immigrant status). Some occupations have been added, however, while others have been removed.

The HRM annual estimates have been updated to 2007. In addition, previous estimates for 1997 to 2006 have been revised as a result of adjustments to the Canadian Productivity Accounts data, which is a key input to the HRM, as well as revisions to the labour force survey data. As well, new census data were incorporated along with the NOC-S 2006 occupation classification. The change in classification will help to keep the HRM relevant and up-to-date. The basic principle of classification of the NOC-S is that of kind of work performed.

---

8. The operational definition of tourism has been revised with the new, redesigned Travel Survey of Residents of Canada. Tourism will now include all overnight "out of town" (according to a respondent's perception) trips and same-day trips exceeding forty kilometres one way from home. In addition to the usual exclusions, routine trips, such as for grocery shopping, will be excluded even if "out of town" or over forty kilometres.

9. Unduplicated means that values are not double counted. If, for example, the value of fuel used by aircraft is counted along with airfares (which already include the costs of fuel inputs) the value of the fuel would be counted twice. Instead, only the value added (the difference between revenues from sales of goods and services produced and the cost of intermediate inputs of goods and services) at each stage of production is counted in GDP. It should be noted that GDP in the CSNEA and CTSA is measured at basic prices. This means essentially that valuation is at the prices received by sellers, and does not include taxes on the sale of goods and services.

10. The qualifier "directly" is important. To continue the example from above, "directly" means that only the GDP generated in the production of passenger air transportation (which visitors consume in their travels) can be counted in tourism GDP, not any of the GDP or value added generated in the production of goods and services that are inputs to air transport (like the fuel which airlines use). It is in this sense that tourism GDP is directly attributable to visitor spending. There is, of course, GDP generated in the upstream production chain that can be attributed to tourism, but only indirectly. Estimates of the direct and indirect effects of tourism can be obtained from economic impact models.

11. In the CTSA, GDP is calculated using the sum of incomes generated by production approach, one of the three approaches to measuring GDP. The other two approaches are based on summing (1) the final expenditures on goods and services produced, and (2) the value added generated in the production of goods and services.

4.1 Industry classifications

This study uses the North American Industry Classification System (NAICS) 2002 to define the tourism-related industries. Briefly, NAICS is a comprehensive industry classification system encompassing all economic activities. It is designed for the compilation of production statistics and, therefore, for the classification of data relating to establishments (and locations). The criteria used to group establishments into industries in NAICS are similarity of input structures, labour skills or production processes used.

In order to maintain the reliability of the data, several tourism industries have been grouped together. Thus the tourism industry groups of the HRM include:

1. Transportation

   Air transportation
   All other transportation (includes rail, water, bus, taxi and vehicle rental)
2. Accommodation
3. Food and beverage services
4. Recreation and entertainment
5. Travel services.

In this update a refinement was made to better match the tourism industries in the CTSA. As a result, several non-tourism sub-industries are now excluded from the estimates. See Appendix C for a complete list, including NAICS codes.

4.2 Occupational classification

This study uses the National Occupational Classification for Statistics (NOC-S) definitions of occupations. An occupation is thus defined as a collection of jobs, sufficiently similar in work performed to be grouped under a common title for classification purposes.

The selection of occupations for this study is based on an examination of the occupational data from the 2001 Census for persons in the experienced labour force whose main job was in one of the tourism industry groups of the HRM. Occupations with an estimated 5,000 employed persons (i.e., with underlying samples of roughly 1000 persons) or more were selected for this study.

Occupations were added if the 2006 Census obtained more than 1000 persons in the sample: casino occupations (G723), food counter attendants, kitchen helper and related occupations (G961) and technical occupations related to museum and arts galleries (F112) were added for recreation and entertainment industries. Program leaders and instructors in recreation and sport (F154) for accommodation industries were also added.

Conversely, occupations were removed if the 2006 Census obtained fewer than 500 persons in the sample. These occupations were too "small" to support time series based on much thinner samples from the LFS. Between 500 and 1000 persons, some occupations were removed: facility operation and maintenance manager (A141) was removed for recreation and entertainment industries and railway track maintenance workers (H732) and railway carmen/women (H414) were removed for other transportation industries. A detailed listing of occupations along with their NOC-S codes is included in Appendix D.

5. Results

Because the HRM contains such a large amount of data, the intent here is simply to highlight some findings and to illustrate some of the types of analyses the HRM can support. The analysis will focus on the year 2007 and changes from the previous year.

The year 2007 was characterized by strong growth in domestic tourism (+6.8%). Low unemployment and interest rates coupled with strong gains in disposable income contributed to solid gains in spending on tourism by Canadians. Economy-wide growth (as measured by GDP) was 2.5% in 2007, while tourism GDP grew 3.7%, as shown in Table 1. In addition, job growth in Canada was 2.1%, while the number of jobs in tourism industries was up 3.4%.

However, the year also registered continued weakness from international visitors. High gasoline prices, the stronger Canadian dollar, tighter passport regulations and a faltering U.S. economy contributed to weakness in visits from south of the border. Spending from international visitors was down 3.6% in 2007.

5.1 Jobs, hours and earnings in tourism industries

This section provides some broad comparisons with the overall economy in terms of the key variables of the HRM: jobs, hours worked and compensation.

Total compensation (wages and salaries, supplementary labour income, and income after expenses accruing to the self-employed) in the tourism industries was $46.9 billion in 2007, up 8.7% from the previous year. This was the fastest pace in ten years, driven by an increase in the number of jobs and higher hourly earnings. In comparison, labour compensation across all jobs in the economy was up 6.1% in 2007, a slower pace than in 2006.

Jobs in tourism industries totalled 1.7 million in 2007 (see Table 2) according to the HRM,[12] including both full-time and part-time jobs, as well as employee jobs and jobs from self-employment. In other words, the tourism sector accounted for 9.6% of all jobs in the economy, about the same as in the previous ten years.

Part-time jobs were twice as prevalent as in the economy overall. Four out of ten jobs in tourism were part-time. Jobs from self-employment accounted for 6.9% of all jobs in tourism industries, but 9.4% of jobs in the Canadian economy overall.

The number of jobs in tourism grew 3.4% in 2007, more than twice the average 1.6% growth registered by tourism industries from 1997 to 2006. Some 55 thousand jobs were created in the tourism sector, of which 32 thousand were full-time. The majority were employee jobs (47 thousand).

12. When taking into account only the employment that can be directly attributed to tourism spending (i.e., tourism demand) one obtains a very different picture. The National Tourism Indicators (NTI) indicates that of the jobs in tourism industries in 2007, only 525 thousand can be directly attributed to tourism. As mentioned earlier, the demand-side components of the HRM are not included in this report.

Table 1 Gross domestic product, tourism gross domestic product, tourism expenditures and jobs, tourism industries and total economy, 2001 to 2007

	2001	2002	2003	2004	2005	2006	2007
Total economy							
Gross domestic product at basic prices (millions of 2002 $)	1,041,432	1,068,768	1,091,478	1,126,085	1,157,808	1,191,269	1,220,813
percentage change	1.5	2.6	2.1	3.2	2.8	2.9	2.5
Jobs (thousands)	15,205	15,586	15,916	16,189	16,455	16,755	17,110
percentage change	1.0	2.5	2.1	1.7	1.6	1.8	2.1
Tourism supply							
Jobs in tourism industries (thousands)	1,522	1,554	1,588	1,594	1,564	1,596	1,650
percentage change	1.0	2.1	2.2	0.4	-1.9	2.0	3.4
Tourism demand							
Tourism gross domestic product at basic prices (millions of 2002 $)	23,221	23,319	22,827	23,836	24,729	25,619	26,560
percentage change	-0.2	0.4	-2.1	4.4	3.7	3.6	3.7
Tourism demand (millions of 2002 $)	56,225	56,562	55,694	58,565	60,865	63,199	65,863
percentage change	1.0	0.6	-1.5	5.2	3.9	3.8	4.2
Tourism domestic demand	37,709	38,445	39,857	41,165	44,119	47,451	50,686
percentage change	1.6	2.0	3.7	3.3	7.2	7.6	6.8
Tourism demand by non-residents (exports)	18,516	18,116	15,837	17,400	16,746	15,748	15,177
percentage change	-0.2	-2.2	-12.6	9.9	-3.8	-6.0	-3.6
Jobs directly attribuable to tourism (thousands)[1]	488	491	491	496	501	511	525
percentage change	-0.5	0.4	0.2	0.8	1.1	2.1	2.7

1. Excludes jobs generated by tourism spending in non-tourism industries.

Table 2 Total jobs, average weekly hours worked and average hourly compensation, tourism industries and total economy, 2001 to 2007

	2001	2002	2003	2004	2005	2006	2007	percent change 2006 to 2007
Compensation	millions of $							
Total tourism industries	36,406	37,965	38,378	40,094	40,353	43,081	46,845	8.7
Total economy	598,035	621,838	650,308	687,585	726,345	774,844	821,889	6.1
Number of jobs	thousands							%
Transportation	203	207	207	197	185	195	207	6.3
Air transportation	69	65	62	60	51	53	55	3.7
Other transportation	134	142	145	138	134	142	152	7.2
Accommodation	212	225	225	226	226	226	234	3.6
Food and beverage services	823	814	834	834	834	858	881	2.7
Recreation and entertainment	242	263	277	294	273	272	282	3.7
Travel services	43	45	45	44	46	45	47	3.2
Employee	1,408	1,441	1,470	1,480	1,455	1,489	1,536	3.2
Self-employed	114	114	118	115	108	107	114	7.1
Full-time	941	950	975	987	960	965	997	3.4
Part-time	582	604	613	607	604	631	653	3.5
Total tourism industries	1,522	1,554	1,588	1,594	1,564	1,596	1,650	3.4
Total economy	15,205	15,586	15,916	16,189	16,455	16,755	17,110	2.1
Average weekly hours worked per job	hours							%
Transportation	35.0	34.6	34.6	35.7	35.0	35.1	34.6	-1.6
Air transportation	33.9	33.7	33.7	35.2	33.4	33.3	32.3	-3.1
Other transportation	35.6	34.9	35.0	35.9	35.6	35.8	35.4	-1.2
Accommodation	34.0	33.5	33.3	33.9	33.8	33.4	34.0	1.7
Food and beverage services	28.5	27.9	28.4	28.3	27.7	28.1	28.0	-0.3
Recreation and entertainment	28.4	28.0	27.8	28.0	27.2	27.4	27.5	0.4
Travel services	34.5	34.1	33.4	35.1	34.4	34.6	34.3	-0.9
Employee	29.7	29.2	29.4	29.6	29.1	29.4	29.3	-0.1
Self-employed	37.9	36.8	36.7	37.0	35.3	35.7	35.7	-0.1
Full-time	39.2	38.7	38.8	39.0	38.2	38.9	39.0	0.2
Part-time	16.0	15.8	15.8	15.7	15.8	15.8	15.6	-0.7
Total tourism industries	30.3	29.8	30.0	30.2	29.6	29.8	29.8	0.0
Total economy	33.8	33.5	33.3	33.5	33.3	33.3	33.3	-0.2
Average hourly compensation per job [1]	dollars							%
Transportation	26.70	26.68	27.55	28.05	29.66	29.42	30.26	2.9
Air transportation	31.38	32.07	32.72	31.79	32.80	34.46	36.74	6.6
Other transportation	24.42	24.32	25.43	26.46	28.54	27.67	28.13	1.7
Accommodation	14.26	14.15	13.87	14.48	15.14	16.62	17.30	4.1
Food and beverage services	10.52	11.32	10.91	11.47	12.26	12.57	13.54	7.7
Recreation and entertainment	19.32	19.87	19.34	19.65	20.57	22.12	22.73	2.7
Travel services	18.67	18.75	19.19	19.74	20.46	21.43	22.60	5.5
Employee:	15.16	15.73	15.47	15.93	16.69	17.28	18.17	5.2
of which wages	13.71	14.18	13.78	14.09	14.74	15.39	16.18	5.1
Self-employed	15.29	16.06	15.92	17.09	17.87	19.24	20.10	4.5
Full-time	16.12	16.83	16.52	17.13	17.93	18.43	19.42	5.4
Part-time	11.41	11.66	11.54	11.65	12.39	13.67	14.20	3.9
Total tourism industries	15.17	15.76	15.51	16.04	16.79	17.44	18.33	5.1
Total economy	22.32	22.87	23.56	24.24	25.39	26.61	27.68	4.0

1. Hourly compensation includes wages and salaries, supplementary labour income and labour portion of income after expenses accruing to the self-employed.

A total of 2.6 billion hours was worked in tourism industries in 2007, accounting for 8.6% of the 29.7 billion hours worked economy-wide. This indicates an average work week of 29.8 hours in tourism, somewhat less than the economy-wide average of 33.3 hours. The shorter week reflects the higher proportion of part-time jobs found in tourism industries (40%) as compared to the economy overall (20%).

The average compensation per job in tourism was $18.33 per hour in 2007, up 5.1% from $17.44 the year before. For comparison, the average hourly compensation economy-wide was $27.68. In relative terms, hourly compensation in tourism industries has been quite stable at two-thirds of the national average over 2003 to 2007.

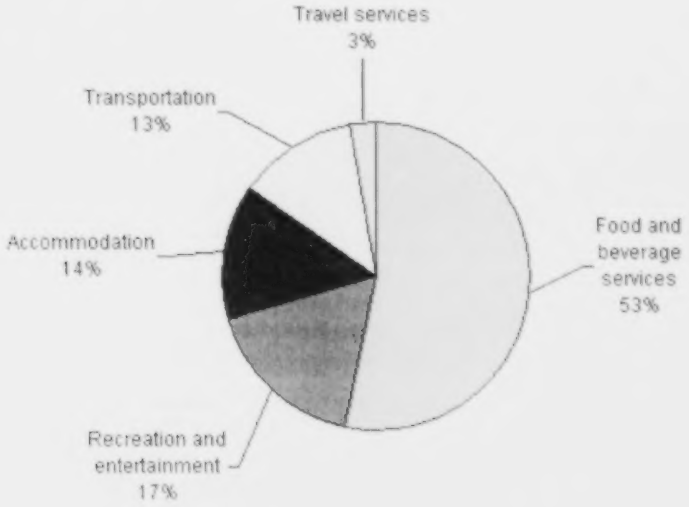
5.2 Tourism industry profiles

The HRM contains aggregated data on five tourism industry groups: transportation (with details available for air transportation and other transportation), accommodation, food and beverage services, recreation and entertainment and travel services. Appendix C lists the industries included in each industry group of the tourism sector. The following provides selected results intended to give a flavour of the kinds of industry analyses possible with the HRM.

Food and beverage services

The food and beverage services industry was the largest employer amongst tourism industries in 2007 with 881 thousand jobs, accounting for over half of all jobs in tourism industries (see Chart 1). However, this industry registered the weakest job growth (+2.7%) among the tourism industry groups in 2007. Most of these gains were in part-time employee jobs.

Chart 1 Distribution of jobs in tourism industries, 2007



The work week in this industry averaged 28.0 hours, below the average 29.8 hours across all tourism industries. This reflected the high share of part-time jobs found in this industry, 47%, the highest proportion among the tourism industries.

Jobs in food and beverage services continued to pay the least of all tourism industries, with an average hourly compensation of $13.54 in 2007. Even though this was up significantly (+7.7%) from the year before, it remained well below the average in tourism of $18.33.[13]

The hourly *wage* for all jobs in food and beverage services was $12.39. This is less than the hourly *compensation* ($13.54) which includes supplementary labour income (employer contributions on behalf of employees to employment insurance, private and public pension plan contributions, and retirement allowances).

There was considerable variation in hourly wages by occupation within this industry group. Restaurant and food service managers earned the most, $15.78 per hour, while cashiers earned the least, $9.90.

Recreation and entertainment

The recreation and entertainment industry group was the second largest employer among the groups included in the HRM, accounting for about one in five (or 282 thousand) jobs. This industry added 10 thousand jobs (+3.7%) in 2007. These gains were mainly in full-time employee jobs, as the number of part-time employee jobs fell.

The industry continued to have the highest proportion of jobs from self-employment (16.6%), accounting for 41% of the self-employment jobs in tourism. The work week averaged 27.5 hours, the shortest among tourism industries, reflecting a significant proportion (43%) of part-time jobs.

Accommodation

With 234 thousand jobs, the accommodation industry was the third largest employer among the tourism industry groups of the HRM. Light-duty cleaner was the most prevalent occupation, with almost 46 thousand jobs in 2007, most of them held by women.

The accommodation industry registered another strong gain in wages and salaries in 2007, paying out $6.2 billion, an increase of 9.5% over the previous year. The increase stemmed from more jobs and longer work hours. Hours worked per week increased from 33.4 to 34.0 hours, as full-time jobs replaced part-time jobs.

Hourly wages were up 3.7% in 2007 to $15.77, but still below the sector average of $16.18.

Transportation

The transportation industry group (which consists of air transportation and other transportation, including rail, water and bus travel, as well as taxis and car rentals) accounted for almost 13% of all jobs in tourism in 2007.

Air transportation alone accounted for 55 thousand jobs, up 3.7% from 2006. An additional 1,800 employee jobs were generated in air transportation in 2007, some 1,500 of which were part-time.

While the air transportation industry accounted for only 3.3% of jobs in the tourism sector in 2007, it accounted for twice as much labour compensation (7.2%). Employee jobs in air transportation paid more than in other tourism industries, with an hourly wage of $30.49, nearly twice the average across all jobs in tourism.

The other transportation industry group posted the strongest job growth (+7.2%) in 2007. It accounted for 152 thousand jobs, a gain of 10 thousand jobs from the previous year.

13. Gratuities are included in these numbers. See Appendix A.1.

These jobs came with the longest work week, an average 35.4 hours, almost 6 hours more compared to all tourism jobs. One reason for this was the relatively high proportion of full-time jobs (79%). Another reason was the long hours worked by the self-employed in these industries (44.5 hours per week) and their relatively high proportion (15%), double the sector average (7%).

These jobs also paid well, with wages of $25.43 per hour, second only to air transportation. Given that other transportation comprises a mix of several industries, including bus, rail, water, taxi and vehicle rental, it is not surprising to observe a wide range of wages. Taxi drivers and chauffeurs, for example, earned only $9.56 per hour, while transportation managers earned $40.84.

The most prevalent occupation in other transportation was bus drivers and subway and other transit operators accounting for more than one-third of all jobs in the industry. They were paid an hourly wage of $22.83.

Travel services

Travel services was the smallest industry group with 47 thousand jobs in 2007, up 3.2%, following a decline in 2006. This industry group accounted for only 2.8% of all jobs in tourism.

Wages in this industry group were above the sector average ($21.24 per hour versus $16.18), as were the hours worked (34.5 hours per week versus 29.8).[14] Travel services had the highest proportion of full-time jobs in the tourism sector in 2007, at 84%.

Travel counsellors were the predominant occupation in the travel services industry group, accounting for 50% of the industry's employee jobs. Retail trade managers were the second largest occupation group representing 8% of jobs in travel services.

5.3 Occupations in tourism industries

Three occupation groups dominated employee jobs in tourism industries, accounting for almost 40% of jobs, as shown in Chart 2. These were food counter attendants and kitchen helpers, food and beverage servers and cooks.

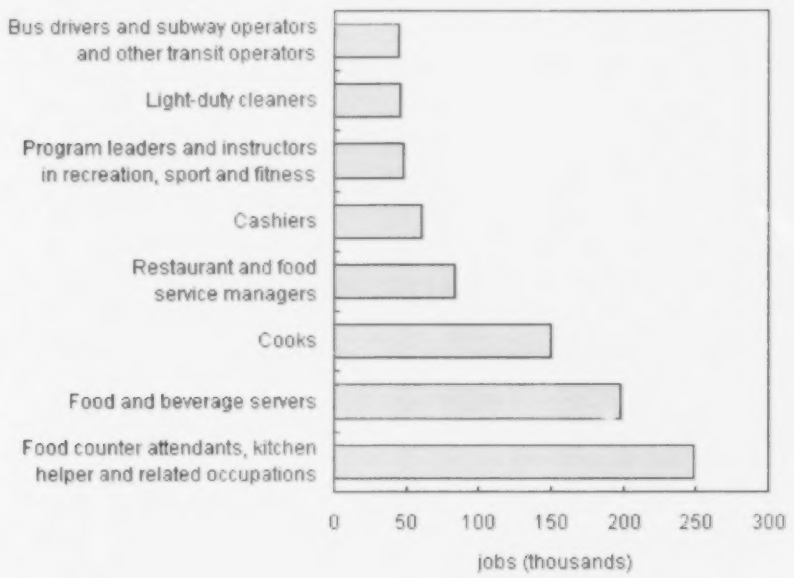
Food counter attendants and kitchen helpers worked mainly in three industries: food and beverage services, recreation and entertainment and accommodation. Food and beverage servers and cooks were concentrated in two industries: the food and beverage services and accommodation industries.

All three occupation groups were paid well below the tourism average wage of $16.18 in 2007. In the food and beverage services industry, jobs for food counter attendants and kitchen helpers paid $10.21 per hour, servers earned $11.17 per hour and cooks, $11.15. However, jobs in these occupations paid more in the accommodation industry, about $2 an hour more on average.

Food counter attendants and kitchen helpers in the food and beverage services industry worked on average 19.5 hours weekly. Two-thirds of these jobs were part-time. Server jobs averaged 25 hours per week in this industry. One of every two of these jobs was part-time. On the other hand, cooks had longer work weeks in food and beverage services (30 hours) and in accommodation (38 hours).

14. Hours worked for both employees and self-employed.

Chart 2 Main occupations in tourism industries, 2007



5.4 Profile of employees in tourism industries

The HRM provides details on three characteristics of employees namely, gender, age group, immigrant status. The following highlights some of the HRM results according to these demographics (see Table 3).

Gender

Women were over-represented in the tourism sector in 2007, holding a total of 857 thousand employee jobs, 178 thousand more than men. Economy-wide, women accounted for 50% of employee jobs[15] while they accounted for 56% of jobs in the tourism sector.

Women were notably under-represented in transportation industries, holding only 26% of the employee jobs in other transportation industries and 42% in air transportation. Conversely, 70% of jobs in travel services were held by women (see Chart 3).

Women were more likely to be in part-time jobs than men. As a result, they had shorter work weeks in all tourism industries. This was especially the case in transportation industries (27 hours per week in jobs held by women on average, compared to 36 hours for men).

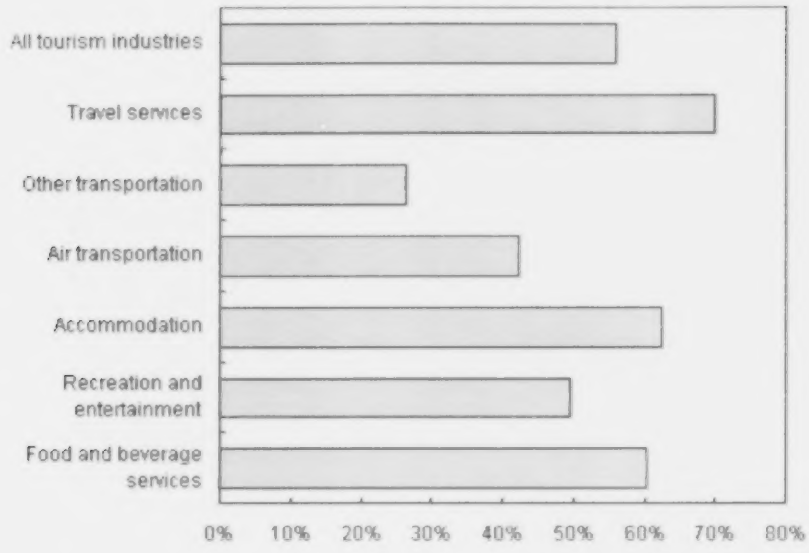
Women working in tourism industries in 2007 earned less than men ($14.01 per hour versus $18.47). There was significant variation in women's wages, with jobs in air transportation paying the most, $24.52 on average, and jobs in food and beverage services paying the least ($11.57).

15. Source: Labour Force Survey, CANSIM Table 282-0080.

Table 3 Employee jobs, hours and wages by employee characteristics, tourism industries, 2007

	Total	Gender		Age group				Immigrant status	
		Female	Male	15 to 24	25 to 34	35 to 44	45 +	Immigrant	Non-immigrant
Number of employee jobs					thousands				
Transportation	183	57	126	13	32	42	96	41	142
Air transportation	54	23	31	6	15	15	18	12	42
Other transportation	129	34	95	7	17	26	79	28	100
Accommodation	223	139	84	64	45	40	74	52	171
Food and beverage services	853	515	338	431	150	117	155	200	653
Recreation and entertainment	235	117	118	92	40	35	68	32	203
Travel services	43	30	13	6	10	10	17	13	30
Full-time	929	478	450	197	212	198	321	239	690
Part-time	607	379	228	408	65	46	88	98	509
Total tourism industries	1,536	857	679	606	277	244	409	337	1,199
Average weekly hours worked per job					hours				
Transportation	33.2	27.0	36.1	22.6	33.0	35.9	33.6	34.4	32.9
Air transportation	32.1	26.7	36.0	21.3	31.9	34.5	33.9	30.9	32.5
Other transportation	33.7	27.2	36.1	23.7	33.9	36.7	33.6	35.9	33.1
Accommodation	33.9	31.4	38.1	20.2	37.6	41.4	39.7	40.8	31.9
Food and beverage services	27.5	25.7	30.4	18.9	33.9	37.3	38.1	33.2	25.8
Recreation and entertainment	27.5	25.8	29.1	14.7	35.2	39.7	34.0	31.0	26.9
Travel services	34.5	33.4	36.9	22.5	34.2	38.8	36.2	36.8	33.4
Full-time	38.2	35.6	41.0	27.7	39.3	42.3	41.4	41.9	36.9
Part-time	15.8	16.2	15.1	14.0	19.4	20.3	18.9	16.5	15.7
Total tourism industries	29.3	27.0	32.3	18.5	34.6	38.1	36.6	34.5	27.9
Average hourly wages per job					dollars				
Transportation	26.88	23.23	28.11	15.63	22.83	27.38	28.98	23.21	27.98
Air transportation	30.49	24.52	33.75	15.52	23.58	32.33	37.81	28.37	31.10
Other transportation	25.43	22.36	26.26	15.72	22.19	24.70	26.99	21.26	26.71
Accommodation	15.77	14.09	18.08	10.82	14.53	16.58	18.21	17.92	14.94
Food and beverage services	12.39	11.57	13.44	9.82	12.66	13.91	14.57	12.42	12.37
Recreation and entertainment	19.23	17.91	20.38	12.65	18.11	21.40	22.47	19.35	19.21
Travel services	21.24	20.05	23.75	14.40	18.34	22.41	23.67	20.39	21.67
Full-time	17.18	14.65	19.51	10.77	15.35	18.33	20.23	15.94	17.66
Part-time	12.49	12.24	12.93	10.20	13.63	15.21	18.00	13.88	12.21
Total tourism industries	16.18	14.01	18.47	10.48	15.12	18.02	19.98	15.65	16.36

Chart 3 Share of employee jobs held by women in tourism industries, 2007



Youth

Youth aged 15 to 24 years were a major source of labour for the tourism industries, with 606 thousand employee jobs in 2007. They were twice as likely to hold a job in the tourism sector than in the economy overall, accounting for almost four out of ten employee jobs in tourism compared to only two in ten jobs economy-wide[16] (see Chart 4).

These young workers were more likely to be working in part-time jobs and working fewer hours than other tourism workers, accounting for two-thirds of all the part-time jobs in the sector. Young adults and teenagers worked fewer hours per week relative to other workers. This was especially the case in recreation and entertainment and accommodation.

Their wages were also considerably lower. For example, the average hourly wage among workers aged 15-24 was $10.48 in 2007, about half the average ($19.98) for employees aged 45 and over in tourism industries.

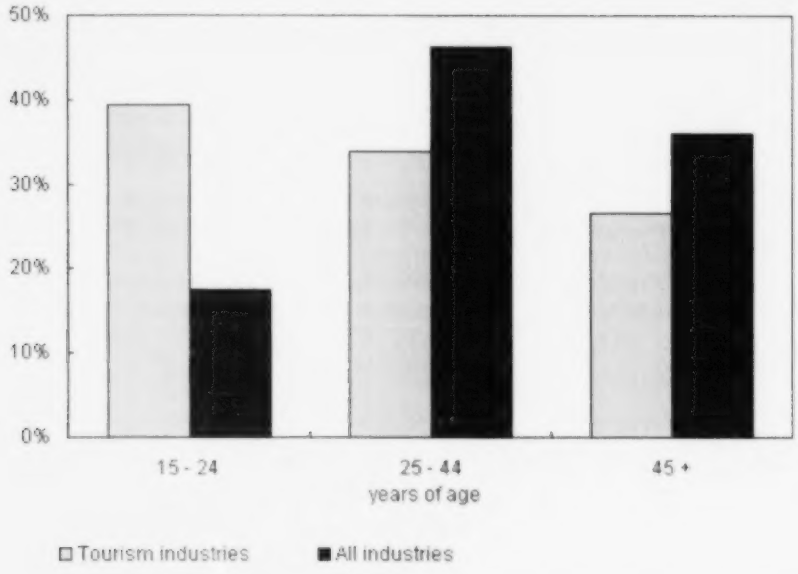
Immigrants

Immigrants were a significant source of labour for the tourism sector in 2007. Immigrants (defined as landed immigrants and non-permanent residents) held 337 thousand jobs, accounting for 22% of tourism employee jobs. In 2006, less than 20% of employees in the manufacturing industry were immigrants and less than 14% of employees in retail were immigrants.[17]

16. Source: Labour Force Survey, CANSIM Table 282-0080.

17. Source: Danielle Zietsman, "The Canadian Immigrant Labour Market in 2006: First Results from Canada's Labour Force Survey," *The Immigrant Labour Force Analysis Series*, Statistics Canada, Catalogue No. 71-606-X.

Chart 4 Share of employee jobs by age group, 2007



Compared to non-immigrants, immigrants were more likely to be employed in travel services but less likely in recreation and entertainment.

On average, immigrants worked longer hours than their non-immigrant counterparts, 34.5 hours per week versus 27.9 in 2007. Immigrants also earned lower wages per hour on average ($15.65 versus $16.36). In other transportation industries, wages were significantly lower for immigrants than other workers ($21.26 versus $26.71).

6. Conclusions and future work

The HRM provides a rich source of information for the planning and analysis of tourism employment in Canada. The linking of the HRM with other tourism databases such as the CTSA and the NTI, allows for even greater analysis. Variables such as labour productivity (GDP divided by hours worked) can now be calculated.

The priority going forward is to improve the timeliness of the HRM by moving to quarterly estimates. In addition, with the national database now on a sound footing, consideration is being given to building a regional dimension to enable use of the HRM for the monitoring, planning and analysis of tourism employment at the provincial/territorial level. The feasibility of such an extension will be explored through pilot studies for selected jurisdictions.

Appendix A: Data sources

There are four main sources of data underlying the Human Resource Module estimates. They are the Canadian Productivity Accounts (CPA) data in the Canadian System of National Economic Accounts (CSNEA), the Census, the Labour Force Survey (LFS), and the Survey of Employment Payroll and Hours (SEPH). These are described below along with their main uses.

A.1 Canadian System of National Economic Accounts

The CPA database in the CSNEA provides the tourism industry group totals for employee jobs and hours worked, labour income, wages and salaries and supplementary labour income, for both full-time and part-time jobs. Comparable data are also available for self-employment jobs, but the income variable is the net income of unincorporated businesses. These totals are for all jobs, including those attributable to both tourism and non-tourism demand. The data are classified on a NAICS basis.

The CPA data for jobs are based, in turn, on the Labour Force Survey estimates for the number of persons employed. This is adjusted to jobs by adding the second jobs of multiple-job holders.[18] Additions are made for employment not covered by the LFS (e.g., regular military, employed persons in the territories or living on Indian reserves, and civil servants working in Canadian embassies abroad) to reflect the total economy. Last, deductions are made to exclude those absent from work without pay during the reference week.[19] SEPH is primarily used to develop the industry allocation of the adjusted LFS benchmarks, although industry surveys and administrative sources are also used for selected industries.

The hours worked data include the following:

- hours actually worked during normal periods of work
- time worked in addition to hours worked during normal periods of work, and generally paid at higher rates than the normal rate (overtime)
- time spent at the place of work on work such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports
- time spent at the place of work waiting or standing-by for such reasons as lack of supply of work, breakdown of machinery, or accidents, or time spent at the place of work during which no work is done but for which payment is made under a guaranteed employment contract
- time corresponding to short periods of rest at the workplace, including tea and coffee breaks.

They exclude:

- hours paid for but not actually worked, such as paid annual leave, paid public holidays, paid sick leave
- meal breaks
- time spent on travel to and from home and work.

The hours worked data are adjusted to correct for reference week effects in order to estimate annual hours worked.

18. Industry of second job is determined based on patterns observed for multiple job holders in the Survey of Labour Income Dynamics.
19. For more details on the current CSNEA methodology see Jean Pierre Maynard, "Annual measure of the volume of work consistent with the SNA: The Canadian experience," paper presented to the annual meeting of the Paris Group, 29 September 2004, Lisbon, Portugal.

In the CSNEA, industry totals for wages and salaries come from a detailed reconciliation of wages and salaries from survey data and T4 administrative data. Estimates for components of supplementary labour income come in part from the T4 system (e.g., employer contributions to EI and Q/CPP), administrative data on registered pension plans and from Workers Compensation Boards, as well as other survey sources (for benefits like life, accident and health insurance).

It should be noted that adjustments for unreported tips are made to the benchmarks for several industries:

- Performing arts and spectator sports and related industries (NAICS 711)
- Amusement, gambling and recreation industries (713)
- Accommodation services (721)
- Food services and drinking places (722).

The adjustments for tips are made on the basis of industry sales of alcoholic beverages, full service restaurant meals (no tips are assumed on fast food), and accommodation. There are additional, smaller imputations for the tips in personal care services (barbershops and beauty salons, etc.) and railway transportation (for luggage porters) industries.

It should be noted that the average hourly earnings are calculated in the HRM as wages and salaries divided by total hours worked. Because tips and pay for absences (sick leave, vacations, etc.) are included in wages and salaries, the hourly earnings include an implicit premium on top of the straight wage for both.

A.2 Census of Population

The Census of Population provides comprehensive data on the demographic, social and economic characteristics of Canadians. Detailed information is collected from one in every five households. Given its large sample size, the Census serves as the most reliable source of information on occupational distributions. As such, data from the 2001 and 2006 Census are used primarily to distribute the CSNEA totals for employee jobs, hours worked and wages and salaries across occupations by gender and age group, and between immigrants and non-immigrants.

The data used in these calculations are based on occupational distributions for persons who had employment income in the census reference years (in this case, 2000 and 2005). The self-employed are excluded in the calculations.

The samples are broken down into part- and full-time categories according to whether the weeks worked in the reference year were primarily full-time (30 or more hours per week) or part-time (less than 30 hours per week). Also, industry group and occupation relate to the main job held during the reference week (defined as the job at which the most hours were worked) or, if unemployed, to the main job held since the start of the reference year (defined as the one in which the most weeks were worked).

Tabulations for this study use the NOC-S 2006 classification for occupations and NAICS 2002 classifications for industries on the 2006 Census and NOC-S 2001 and NAICS 1997 on the 2001 Census. Differences between the classifications systems do not affect tourism industries and occupations.

A.3 Labour Force Survey

The Labour Force Survey (LFS) is conducted monthly and includes approximately 53,400 households, which translates roughly to a sample size of 100,000 people over the age of fifteen. The LFS collects basic labour force activity information including industry and occupation of employment for the survey reference week (normally the

week including the 15th of the month), both for employees and the self-employed. It does not cover the territories, military personnel or civil servants stationed abroad, or persons residing on Indian reserves. Industry data are based on NAICS 2002, while occupation data use NOC-S 2001 for the entire period from 1997 to 2007.

The LFS is used here to develop the time series on jobs, hours worked and wages and salaries by occupation, age and gender for each industry group in the HRM. As mentioned previously, the LFS is used in the CSNEA to establish overall number of jobs totals.

A.4 Survey of Employment, Payrolls and Hours

The Survey of Employment, Payrolls and Hours (SEPH) is conducted monthly. It collects the number of employee jobs and payroll data from a sample of establishments in Canada.

In this survey, establishments are coded by industry through the Business Register, thereby providing a reliable source of timely information on the industry distribution of employee jobs and payrolls. The administrative data are supplemented by the monthly Business Payroll Survey of 11,000 businesses. This survey collects data on employment, earnings and paid or usual hours, according to whether workers are paid by the hour, salaried or remunerated some other way.

SEPH data on a NAICS basis are available back to 1991. Data on the number of jobs, hours paid and earnings are used here to break down the CPA estimates so that they correspond to the definition of tourism industries used in the CTSA. As mentioned earlier, SEPH is also used extensively in the CSNEA to determine the industry distributions of employee jobs.

Appendix B: Methodology

The basic methodology consists of six steps:

1. taking totals from the CSNEA for jobs, hours worked, and wages and salaries
2. disaggregating these totals, using data from the CSNEA for full-time and part-time jobs
3. distributing the CSNEA totals for 2000 and 2005 across occupations, gender and age groups, and immigrant status based on census data
4. building time series from these benchmarks based on movements in corresponding series from the LFS
5. smoothing the time series for LFS occupations, while keeping the overall industry group totals
6. making limited, final adjustments to data values.

The following describes the methodology and implicit assumptions in more detail.

Step 1: Benchmark totals

The industry group totals for jobs, hours worked, labour income and wages and salaries, including the details by class of worker (employee or self-employed), by full- and part-time status, are from the CPA database.

These data do not exactly meet requirements, however, and a number of adjustments are needed. In particular:

1. The labour component of mixed income from self-employment is imputed by multiplying the hours worked in self-employment by the average hourly labour income per employee job. This method assumes that the self-employed and paid employees earn the same on average. However, the imputation is imposed at the lowest level of the CPA database, resulting in differences in earnings between self-employed and paid employees in tourism industry aggregates.
2. The CSNEA jobs data follow the CSNEA version of NAICS, which is simply a special aggregation that defines the working level (W level) industries of the Input-Output Tables. At this level, detail is available only for two parts of accommodation services, traveller accommodation (NAICS 7211) and RV parks, recreational campgrounds and rooming and boarding houses (NAICS 7212 + NAICS 7213 = 721A at the W level). An adjustment is required to remove rooming and boarding houses. This is done using details from SEPH on the industry's share of overall jobs, hours and earnings. These shares are used to adjust both employee and self-employment jobs. The same method is used to remove the non-tourism sub-industries of rail transportation (NAICS 4821), automotive equipment rental and leasing (NAICS 5321), food services and drinking places (NAICS 7220), performing arts, spectators and related industries (NAICS 7110) and amusement and recreation industries (NAICS 7131+ NAICS7132 + NAICS 7139 = 713A at the W level).

Step 2: Distribution of CSNEA data by full- and part-time status

Data from the CPA database in the CSNEA are used to split jobs, hours worked and income by full-time and part-time status.

Step 3: Distribution of industry totals by occupation

Information on the occupational distribution of jobs comes from the Census. Step 3 involves using this source to distribute the CSNEA totals by occupation, gender, age group and immigrant status.

This step relates only to employee jobs, as occupational details are not developed for the self-employed. The Census of Population is used to distribute the industry group totals established in the second step for the years 2000 and 2005 (i.e., the reference years for the 2001 and 2006 Censuses).

To develop occupational distributors for the industry group totals, special census tabulations are prepared, identifying persons in the tourism industries who had employment income in the reference year and were not self-employed. The selected persons are grouped according to their industry and whether they worked mainly full- or part-time during the reference year. For each of these groups the distribution of the (weighted) sample by occupation is determined, as well as the distribution of total hours worked and wage and salary income.

The occupational distributor for hours worked is based on the distribution of total hours (jobs multiplied by average hours worked) across occupations within each industry group.

The occupational distributor for wages and salaries is based on the distribution of total wages and salaries (jobs multiplied by hours worked multiplied by hourly earnings) across occupations in each industry group.

Step 4: Building the occupational time series

Step 4 entails using the corresponding LFS annual average series by occupation, age group and gender to build a time series. Information on immigrant status while available from the LFS was not considered robust enough at the detailed level, and therefore the percentage distribution from the census reference years (2000 and 2005) is used. To take into account the change in the immigrant ratio between the two censuses, a linear interpolation is used. The LFS data are adjusted to the census levels to maintain growth rates between the census years.

Step 5: Smoothing the LFS data

Step 5 entails smoothing (using a four-year moving average) to reduce volatility in the occupational time series found in the LFS. It is implemented in a way that preserves the overall industry group totals (from the CSNEA) and the occupational distributions (from the 2001 and 2006 Census).

A simple moving average is applied to the indicators (discussed in Step 3) used to build the time series on jobs, hours worked and wages and salaries, full- and part-time, by occupation and for each industry. A four-year moving average was judged to provide the best results overall in terms of reasonableness and consistency, reduced volatility, and minimizing the need for manual adjustments.

Step 6: Other adjustments

The last step in developing the total industry estimates involves adjustments when the smoothed series appear out of line or generate erratic movements in the implied average annual hours or average hourly earnings. More specifically, adjustments are made if hourly earnings are more than four times higher than the corresponding occupation average or less than half of the Ontario minimum wage or if hours reported are more than 70 hours a week. Results indicate that the smoothing and adjustments have little effect on the general pattern of the occupational distributions. Approximately 1.4% of data cells were adjusted after the smoothing, affecting only 0.1% of jobs.

Appendix C: Tourism industries in the HRM

North American Industry Classification System (NAICS) 2002

1. Transportation

1.1 Air transportation

4811 Scheduled air transport
4812 Non-scheduled air transport

1.2 All other transportation industries

4821 Rail transportation
of which:
Tourism sub-industries
482114 Passenger rail transportation
Non-tourism sub-industries
482112 Short-haul freight rail transportation
482113 Mainline freight rail transportation

4831 Deep sea, coastal and great lakes water transportation
4832 Inland water transportation
4851 Urban transit systems
4852 Interurban and rural bus transportation
4853 Taxi and limousine service
4854 School and employee bus transportation
4855 Charter bus industry
4859 Other transit and ground passenger transportation
4871 Scenic and sightseeing transportation, land
4872 Scenic and sightseeing transportation, water
4879 Scenic and sightseeing transportation, other
5A0510[1] Automotive equipment rental and leasing
of which:
Tourism sub-industries
532111 Passenger car rental
532120 Truck, utility trailer and RV (recreational vehicle) rental and leasing
Non-tourism sub-industries
532112 Passenger car leasing

2. Accommodation

7211 Traveller accommodation
721A[1] RV (recreational vehicle) parks and recreational camps
of which:
Tourism sub-industries
721211 RV (recreational vehicle) parks and campgrounds
721212 Hunting and fishing camps
721213 Recreational (except hunting and fishing) and vacation camps
Non-tourism sub-industries
721310 Rooming and boarding houses

3. Food and beverage services

7220 Food services and drinking places
of which:
Tourism sub-industries
72211 Full-service restaurants
72221 Limited-service eating places
72241 Drinking places (alcoholic beverages)
Non-tourism sub-industries
72231 Food service contractors
72232 Caterers
72233 Mobile food services

4. Recreation and entertainment

51213 Motion picture and video exhibition
7110 Performing arts, spectator sports and related industries
of which:
Tourism sub-industries
7111 Performing arts companies
7112 Spectator sports
7115 Independent artists, writers and performers
Non-tourism sub-industries
7113 Promoters (presenters) of performing arts, sports and similar events
7114 Agents and managers for artists, athletes, entertainers and other public figures

7121 Heritage institutions
713A[1] Amusement and recreation industries
7131 Amusement parks and arcades
7132 Gambling industries
7139 Other amusement and recreation industries
of which:
Tourism sub-industries
71391 Golf courses and country clubs
71392 Skiing facilities
71393 Marinas
71395 Bowling centres
71399 All other amusement and recreation industries
Non-tourism sub-industries
71394 Fitness and recreational sports centres

5. Travel services

5615 Travel arrangement and reservation services

1. Special aggregation of NAICS industries in CSNEA.

Appendix D: Tourism occupations in the HRM

National Occupational Classification for statistics (NOC-S) 2006

Occupations listed by tourism industry groups	NOC-S 2006[1]
Accommodation	
Accommodation service managers	A222
Program leaders and instructors in recreation, sport and fitness[2]	F154
Chefs	G411
Cooks	G412
Bartenders	G512
Food and beverage servers	G513
Hotel front desk clerks	G715
Light duty cleaners	G931
Janitors, caretakers and building superintendents	G933
Food counter attendants, kitchen helpers and related occupations	G961
All other accommodation occupations	
Transportation	
Air transportation	
Air pilots, flight engineers and flying instructors	C171
Pursers and flight attendants	G712
Airline sales and service agents	G713
Aircraft mechanics and aircraft inspectors	H415
Air transport ramp attendants	H737
All other air transportation occupations	
All other transportation	
Transportation managers	A373
Retail salespersons and sales clerks	G211
Automotive service technicians, truck and bus mechanics and mechanical repairers	H421
Bus drivers and subway operators and other transit operators	H712
Taxi and limousine drivers and chauffeurs	H713
Railway and yard locomotives engineers	H721
Railway conductors and brakemen/women	H722
All other transportation occupations	

Occupations listed by tourism industry groups	NOC-S 2006[1]
Food and beverage services	
Restaurant and food service managers	A221
Food service supervisors	G012
Cashiers	G311
Chefs	G411
Cooks	G412
Maîtres d'hôtel and hosts/hostesses	G511
Bartenders	G512
Food and beverage servers	G513
Bakers	G942
Food counter attendants, kitchen helpers and related occupations	G961
Delivery and courier service drivers	H714
All other food and beverage services occupations	
Recreation and entertainment	
Recreation, sports and fitness program and service directors	A343
Technical occupations related to museums and art galleries[2]	F112
Program leaders and instructors in recreation, sport and fitness	F154
Retail salespersons and sales clerks	G211
Cashiers	G311
Security guards and related occupations	G631
Casino occupations[2]	G723
Operators and attendants in amusement, recreation and sport	G731
Janitors, caretakers and building superintendents	G933
Food counter attendants, kitchen helpers and related occupations[2]	G961
Landscaping and grounds maintenance labourers	I212
All other recreation and entertainment occupations	
Travel services	
Retail trade managers	A211
Travel counsellors	G711
All other travel services occupations	

1. NOC-S 2006 and NOC-S 2001 replace the historical SOC91 (SOC91h) for the entire period covered by the HRM, 1997 to 2007. Occupation group G731 (attendants in amusement, recreation and sport) used in SOC91h is now split into two occupation groups in NOC-S 2006: G723 (casino occupations) and G731 (operators and attendants in amusement, recreation and sport). Furthermore, occupation group G960 (used in SOC91h) is now G961 (food counter attendants, kitchen helpers and related occupations). With the introduction of NOC-S 2006, titles were changed for some occupation groups.

2. New occupations with this update of the HRM.

Appendix E: Table structure

The structure of the HRM tables is detailed below.

Tables are available for each of the five tourism industry groups (see Appendix C) included in the HRM, as well as a total for all industries. Details are also available on the air transportation and all other transportation sub-industries of the transportation industry group.

Total employment, hours worked and wages and salaries are available for each industry group. Derived variables including average annual hours worked, average annual wage and salary and average hourly wages are also included.

These variables are split into the following categories:

a. Full-time female
b. Part-time female
c. Full-time male
d. Part-time male
e. Total male
f. Total female
g. Total part-time
h. Total full-time
i. Total

Each of the above categories are split into occupational details (see Appendix D).

The categories "e" to "h" are further split into immigrants and non-immigrants, while the category "i" is further divided up into four age categories: (15-24, 25-34, 35-44, 45+).

It might be noted that for publication purposes, cells of the HRM tables are suppressed whenever the estimated number of jobs is less than twenty. Below this threshold, the data are considered confidential.

Tables on annual employment in tourism industries are now available upon request. Tables on the annual employment directly attributable to tourism (i.e., tourism employment) and quarterly data are a work-in-progress. For more information, contact the information officer (613-951-3640; iead-info-dcrd@statcan.gc.ca), Income and Expenditure Accounts Division.

Glossary of terms

Basic prices: A basic price valuation including the costs of production factors (labour and capital) and indirect taxes and subsidies on production factors. It represents essentially the prices received by the sellers, and does not include taxes on the sales of goods and services.

Employee jobs: All jobs in which the person employed draws compensation for services rendered and for whom the employer must complete a Revenue Canada T4 form. Jobs in which workers are paid by tips or commissions are included. Self-employed proprietors of unincorporated enterprises and unpaid family workers are not included.

Full-time job: One in which a person usually works 30 hours or more per week.

Full-time equivalent employment: Is the number of full-time equivalent jobs.

Full-time equivalent (FTE) jobs: Is defined as total hours worked divided by average annual hours worked in full-time jobs. This can also be described as full-time-equivalent work-years. It is a less precise alternative to expressing labour input in terms of total hours worked.

Gross domestic product (GDP): The total unduplicated value of the goods and services produced in the economic territory of a country or region during a given period. GDP can be measured three ways: as total incomes earned in current production (income approach), as total final sales of current production (expenditure approach), or as total net values added in current production (value added approach). It can be valued either at basic prices or at market prices.

Hours worked: Actual hours worked during normal periods of work, including overtime but excluding paid leave (e.g., holidays, sick leave).

Immigrant: In this study, an immigrant is defined as a person who is a landed immigrant (or has been and has become a Canadian citizen) or a non-permanent resident. A landed immigrant is a permanent resident who is not a Canadian citizen at birth. A non-permanent resident is a person who holds a study or work permit or who is a refugee claimant or is a family member living with this refugee claimant.

Industry: An industry is a group of establishments engaged in the same or a similar kind of economic activity.

Job: A job is defined as an explicit or implicit contract between a person and an institutional unit to perform work in return for compensation for a defined period or until further notice. The institutional unit may be the proprietor of an unincorporated enterprise; in this case the person is described as being self-employed and earns a mixed income. The number of jobs exceeds the number of persons employed by the number of second, third, etc. jobs.

Jobs generated by tourism: Jobs that can be directly attributed to tourism demand.

Labour force: The civilian non-institutional population 15 years of age and over who are either employed or unemployed.

Labour income: Total earnings of employees, consisting of wages and salaries as well as supplementary labour income (such as employer's contributions to pension funds, employee welfare funds, the Employment Insurance Fund and Worker's Compensation Funds).

Main job: The job at which the most hours are worked.

Market prices: A valuation expressed in terms of the prices actually paid by the purchaser, that is, after all applicable taxes (including taxes on the sale of goods and services) and subsidies.

Mixed income: Mixed income is a balancing item in the industry accounts of the Input-Output accounts, representing the return to both self-employed labour and capital of the unincorporated business. Mixed income consists of earnings of proprietors of unincorporated businesses (sole proprietorships and partnerships) such as retailers and consultants, earnings of independent professional practitioners such as lawyers and dentists, net (after expenses) rental income of owners of real property and the accrued net farm income of farm operators.

Multiple-job holder: A person who is employed in more than one job during the reference period.

Non-immigrant: In this study, a non-immigrant is a person who is a Canadian citizen at birth.

Occupation: A collection of jobs, sufficiently similar in work performed (tasks, duties and responsibilities) to be grouped under a common title for classification purposes.

Part-time job: One in which a person usually works less than 30 hours per week.

Satellite account: An accounting system that follows the basic principles of the System of National Economic Accounts but also expands the analytical capacity for selected areas of economic or social concern, without overburdening or disrupting the central system. Satellite accounts are linked with the central framework of the national accounts and through them to the main body of integrated economic statistics.

Self-employment jobs: Includes working-owners of unincorporated enterprises, and members of their households who work without a wage or salary (i.e., unpaid family workers).

Supplementary labour income: Expenditures by employers on their labour account which are regarded as compensation of employees. It includes contributions to employment insurance, private and public pension plan contributions, and (beginning in 1990) retirement allowances.

System of National Economic Accounts (SNEA): The System of National Economic Accounts (SNEA) consists of a coherent, consistent and integrated set of macroeconomic accounts, balance sheets and tables based on a set of internationally agreed concepts, definitions, classifications and accounting rules. In its broad outline, the Canadian System of National Economic Accounts (CSNEA) bears a close relationship to the international standard as described in the United Nations publication: System of National Accounts 1993.

Total hours worked: The aggregate number of hours actually worked during the year in employee and self-employment jobs.

Tourism: The definition of tourism adapted from the World Tourism Organization and the United Nations Statistical Commission is: "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes."

Tourism commodity: Tourism commodity is one for which a significant part of its total demand in Canada comes from visitors.

Tourism demand: The spending of Canadian and non-resident visitors on domestically produced commodities. It is the sum of tourism domestic demand and tourism exports.

Tourism employment: The number of jobs in tourism and non-tourism industries that can be directly attributed to tourism demand. Someone who works 10 hours a week counts for as much, by this measure, as someone who works 50 hours a week. This is also called "employment generated by tourism".

Tourism industry: An industry which as a direct result of the absence of tourism would cease or continue to exist only at significantly reduced levels of activity. Some industries may be affected by the absence of tourism but not directly, for example the absence of tourism would greatly affect the air transportation industry and thus indirectly the catering industry.

Tourism Satellite Account: Tourism Satellite Account is an accounting framework, based on the System of National Economic Accounts that serves to define tourism and is used to compile and integrate statistics on tourism, to measure its importance to the economy, and to facilitate its comparison with other industries within the economy.

Visitors: Visitors are persons who undertake tourism as defined above. They are referred to as either tourists (those who stay overnight or longer in the place visited), or same-day visitors. In Canada, "tourist" is used to denote all visitors, whether they are same-day or overnight visitors.

Wages and salaries: Consists of monetary compensation and payments-in-kind (e.g., board and lodging), to wage earners and salaried persons employed in private, public and non-profit institutions in Canada including domestic servants and baby-sitters. Other forms of compensation included are commissions, bonuses, tips, directors' fees, taxable allowances, and the values of stock options of corporations. Bonuses, commissions and retroactive wages are recorded in the period paid rather than earned. Wages and salaries are recorded on a gross basis, before deductions for taxes, employees' contributions to employment insurance, and private and public pension plans.

References

Barber-Dueck, Conrad and Demi Kotsovos. *The Provincial and Territorial Tourism Satellite Accounts for Canada, 1998*. Income and Expenditure Accounts Technical Series, Catalogue no. 13-604 no. 40, Statistics Canada, Ottawa, June 2003.

Cañada, Agustín, J. Prado and R. Roig, "The measurement of employment in tourism – Spain," presented at joint OECD and Austrian Ministry of Economics and Labour seminar on Tourism, Economics and Labour, Vienna, 14 December 2004.

Canadian Tourism Human Resource Council, *The future of Canada's tourism sector: long on prospects ... short on people*, prepared by the Conference Board of Canada, Ottawa, June 2008.

Canadian Tourism Human Resource Council, *In short supply: tourism – more jobs than workers*, prepared by the Conference Board of Canada, Ottawa, June 2008.

Commission of the European Communities, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations and World Bank. *System of National Accounts, 1993*. Commission of the European Communities, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations and World Bank, Brussels, Luxembourg, New York, Paris, Washington, D.C., 1993.

Commission of the European Communities, Organisation for Economic Co-operation and Economic Development, the Statistical Office of the European Communities, the United Nations and the World Tourism Organisation. *Tourism Satellite Account – Recommended Methodological Framework*. Organisation for Economic Co-operation and Economic Development, the Statistical Office of the European Communities, the United Nations and the World Tourism Organisation, Luxembourg, Madrid, New York, Paris, May 2001.

Hoekstra, Rutger, "Labour in the Dutch TSA," presented at joint OECD and Austrian Ministry of Economics and Labour seminar on Tourism, Economics and Labour, Vienna, 14 December 2004.

Kotsovos, Demi. *Canadian Tourism Satellite Account, 2002*. Income and Expenditure Accounts Technical Series, Catalogue no. 13-604 no. 58, Statistics Canada, Ottawa, October 2007.

Laimer, Peter and Petra Öhlböck, "A TSA-Employment Module for Austria," presented at joint OECD and Austrian Ministry of Economics and Labour seminar on Tourism, Economics and Labour, Vienna, 14 December 2004.

Mohan, M., Gislason, G., McGowan, B., *Tourism-related employment: 1998 update*, prepared for The Canadian Tourism Human Resource Council, November 1998.

Morissette, Charles and Berouk Terefe. *Human Resource Module of the Tourism Satellite Account, Update to 2006*. Income and Expenditure Accounts Technical Series, Catalogue no. 13-604 no. 59, Statistics Canada, Ottawa, April 2008.

Organisation for Economic Co-operation and Economic Development, *Measuring the Role of Tourism in OECD Economies, the OECD Manual on Tourism Satellite Accounts and Employment*, Organisation for Economic Co-operation and Economic Development, Paris, July 2000.

Statistics Canada, 1997 - . *Canadian Civil Aviation*, Statistics Canada Catalogue no. 51-206. Annual.

_____, *Canadian Tourism Satellite Account Handbook*, Income and Expenditure Accounts Technical Series, Catalogue 13-604-MIE, no. 52, Statistics Canada, Ottawa, December 2007.

_____, *Human Resource Module of the Tourism Satellite Account, Update to 2005*, Income and Expenditure Accounts Technical Series, Catalogue 13-604-MIE, no. 55, March 2007.

_____, 1997 - . *Labour Force Information*, Statistics Canada Catalogue no. 71-001. Monthly.

_____, 1997 - . *National Tourism Indicators*. Statistics Canada Catalogue no. 13-009. Quarterly.

Wright, Jennifer. *Total Tourism Sector Employment in Canada: 2006 Update*, Canadian Tourism Human Resource Council, Ottawa, 2007.

Technical series

The Income and Expenditure Accounts Division Technical Series (13-604) provide background information as well as in depth analysis on data reported in any of the following accounts: Income and Expenditure Accounts, Provincial Economic Accounts, Financial Flow Accounts, National Balance Sheet Accounts, Labour Income and the National Tourism Indicators. A list of the papers currently available is presented below. These papers are available on our website at www.statcan.gc.ca, by contacting us at 613-951-3810, by email to iead-info-dcrd@statcan.gc.ca or by writing to Client Services, IEAD, Statistics Canada, 21st floor R.H. Coats Building, 100 Tunney's Pasture Driveway, Ottawa, Ontario, K1A 0T6.

1. "Laspeyres, Paasche and Chain Price Indexes in the Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, fourth quarter 1988.
2. "Technical Paper on the Treatment of Grain Production in the Quarterly Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, first quarter 1989.
3. "Data Revisions for the Period 1985-1988 in the National Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, first quarter 1989.
4. "Incorporation in the Income and Expenditure Accounts of a Breakdown of Investment in Machinery and Equipment", reprinted from *National Income and Expenditure Accounts*, third quarter 1989.
5. "New Provincial Estimates of Final Domestic Demand at Constant Prices", reprinted from *National Income and Expenditure Accounts*, fourth quarter 1989.
6. "Real Gross Domestic Product: Sensitivity to the Choice of Base Year", reprinted from *Canadian Economic Observer*, May 1990
7. "Data Revisions for the Period 1986 1989 in the National Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, first quarter 1990.
8. "Volume Indexes in the Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, first quarter 1990.
9. "A New Indicator of Trends in Wage Inflation", reprinted from *Canadian Economic Observer*, September 1989.
10. "Recent Trends in Wages", reprinted from *Perspectives on Labour and Income*, winter 1990.
11. "The Canadian System of National Accounts Vis-à-Vis the U.N. System of National Accounts", reprinted from *National Income and Expenditure Accounts*, third quarter 1990.
12. "The Allocation of Indirect Taxes and Subsidies to Components of Final Expenditure", reprinted from *National Income and Expenditure Accounts*, third quarter 1990.
13. "The Treatment of the GST in the Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, first quarter 1991.
14. "The Introduction of Chain Volume Indexes in the Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, first quarter 1991.
15. "Data Revisions for the Period 1987-1990 in the National Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, second quarter 1991.
16. "Volume Estimates of International Trade in Business Services", reprinted from *National Income and Expenditure Accounts*, third quarter 1991.
17. "The Challenge of Measurement in the National Accounts", reprinted from *National Income and Expenditure Accounts*, fourth quarter 1991.
18. "A Study of the Flow of Consumption Services from the Stock of Consumer Goods", reprinted from *National Income and Expenditure Accounts*, fourth quarter 1991.
19. "The Value of Household Work in Canada, 1986", reprinted from *National Income and Expenditure Accounts*, first quarter 1992.

20. "Data Revisions for the Period 1988-1991 in the National Income and Expenditure Accounts", reprinted from *National Income and Expenditure Accounts*, Annual Estimates, 1980-1991.

21. "Cross-border Shopping Trends and Measurement Issues", reprinted from *National Income and Expenditure Accounts*, third quarter 1992.

22. "Reading Government Statistics: A User's Guide", reprinted from *Policy Options*, Vol. 14, No. 3, April 1993.

23. "The Timeliness of Quarterly Income and Expenditure Accounts: An International Comparison", reprinted from *National Income and Expenditure Accounts*, first quarter 1993.

24. "National Income and Expenditure Accounts: Revised Estimates for the period from 1989 to 1992", reprinted from *National Income and Expenditure Accounts*, Annual Estimates, 1981-1992.

25. "International Price and Quantity Comparisons: Purchasing Power Parities and Real Expenditures, Canada and the United States", reprinted from *National Income and Expenditure Accounts*, Annual Estimates, 1981-1992.

26. "The Distribution of GDP at Factor Cost by Sector", reprinted from *National income and Expenditure Accounts*, third quarter 1993.

27. "The Value of Household Work in Canada, 1992", reprinted from *National Income and Expenditure Accounts*, fourth quarter 1993.

28. "Assessing the Size of the Underground Economy: The Statistics Canada Perspective", reprinted from *Canadian Economic Observer*, May 1994.

29. "National Income and Expenditure Accounts: Revised Estimates for the period from 1990 to 1993", reprinted from *National Income and Expenditure Accounts*, first quarter 1994.

30. "The Canadian National Accounts Environmental Component: A Status Report", reprinted from *National Income and Expenditure Accounts*, Annual Estimates, 1982-1993.

31. "The Tourism Satellite Account", reprinted from *National income and Expenditure Accounts*, second quarter 1994.

32. "The 1993 International System of National Accounts: Its implementation in Canada", reprinted from *National Income and Expenditure Accounts*, third quarter 1994.

33. "The 1995 Revision of the National Economic and Financial Accounts", reprinted from *National Economic and Financial Accounts*, first quarter 1995.

34. "A Primer on Financial Derivatives", reprinted from *National Economic and Financial Accounts*, first quarter 1995.

35. "The Effect of Rebasing on GDP", reprinted from *National Economic and Financial Accounts*, second quarter 1996.

36. "Purchasing Power Parities and Real Expenditures, United States and Canada An Update to 1998", reprinted from *National Income and Expenditure Accounts*, third quarter 1999.

37. "Capitalization of Software in the National Accounts", *National Income and Expenditure Accounts Technical Series*, February 2002.

38. "The Provincial and Territorial Tourism Satellite Accounts for Canada, 1996", *National Income and Expenditure Accounts Technical Series*, April 2002.

39. "Purchasing Power Parities and Real Expenditures, United States and Canada", reprinted from *National Income and Expenditure Accounts*, first quarter 2002.

40. "The Provincial and Territorial Tourism Satellite Accounts for Canada, 1998", *National Income and Expenditure Accounts Technical Series*, June 2003.

41. "Government revenue attributable to tourism, 1998", *National Income and Expenditure Accounts Technical Series*, September 2003.

42. "Chain Fisher Index Volume Methodology", *National Income and Expenditure Accounts*, November 2003.

43. "Trends in provincial and territorial economic statistics: 1981-2002", *National Income and Expenditure Accounts*, November 2003.

44. "The 1997-2003 Revisions of the National Tourism Indicators", *National Income and Expenditure Accounts*, October 2004.

45. "A study of data revisions to the National Tourism Indicators", *National Income and Expenditure Accounts*, October 2004.

46. "Provincial and Territorial Economic Accounts", *National Income and Expenditure Accounts*, November 2004.

47. "Revisions to the Canadian National Tourism Indicators", *National Income and Expenditure Accounts*, January 2005.

48. "Canadian Tourism Satellite Accounts, 2000", *National Income and Expenditure Accounts Technical Series*, October 2005.

49. "Trends in Saving and Net Lending in the National Accounts", reprinted from *National Income and Expenditure Accounts*, third quarter 2005.

50. "Recent Trends in Corporate Finance: Some Evidence from the Canadian System of National Accounts", reprinted from *National Income and Expenditure Accounts*, fourth quarter 2005.

51. "Human Resource Module of the Tourism Satellite Account, 1997-2002", *National Income and Expenditure Accounts Technical Series*, March 2006.

52. "Canadian Tourism Satellite Account Handbook, *National Income and Expenditure Accounts Technical Series*, December 2007.

53. "Purchasing Power Parities and Real Expenditures, United States and Canada, 1992-2005", *National Income and Expenditure Accounts Technical Series*, February 2007.

54. "Recent Trends in Output and Employment", *National Income and Expenditure Accounts Technical Series*, February 2007.

55. "Human Resource Module of the Tourism Satellite Account, Update to 2005", *National Income and Expenditure Accounts Technical Series*, March 2007.

57. "Government Revenue Attributable to Tourism, 2000 to 2006, *National Income and Expenditure Accounts Technical Series*, September 2007.

58. "Canadian Tourism Satellite Account, 2002", *National Income and Expenditure Accounts Technical Series*, October 2007.

59. "Human Resource Module of the Tourism Satellite Account, Update to 2006", *National Income and Expenditure Accounts Technical Series*, April 2008.

60. "Government Revenue Attributable to Tourism, 2007", *National Income and Expenditure Accounts Technical Series*, November 2008.

61. "Human Resource Module of the Tourism Satellite Account, 2007", *National Income and Expenditure Accounts Technical Series*, May 2009.